SECOND ANNOUNCEMENT & CALL FOR REGISTRATION

2-6 SEPTEMBER 2019 - FLORENCE | ITALY

www.petroleumgeostatistics2019.org
Join this Conference

Following the successful conferences in Toulouse (France) in 1999, Cascais (Portugal) in 2007 and Biarritz (France) in 2015, Petroleum Geostatistics 2019 will focus on new methods and applications in the field of geostatistics for the petroleum industry. While maintaining its strong focus on geo-modelling, integration of various data sources and uncertainty quantification, petroleum geostatistics has also gone broader the last years – and discussions on spatial and temporal components in machine learning and data science approaches are expected. We hope to see you in Florence!

Dario Grana and Jo Eidsvik
Conference chairs
Committee

Conference Chairs

Jo Eidsvik  NTNU
Dario Grana  University of Wyoming

Technical Committee

Petter Abrahamsen  Norwegian Computing Center
Leonardo Azevedo  Instituto Superior Técnico
Hilde Borgos  Schlumberger
Tatiana Chugunova  Total
Colin Daly  Schlumberger
Ernesto Della Rossa  Eni S.p.A, E&P
Vasily Demyanov  Heriot-Watt University
Yann Dexcote  Shell
Philippe Doyen  Independent Consultant
Olivier Dubrule  Imperial College
James Gunning  CSIRO
Brahim Hamouche  Saudi Aramco
Evgeniy Kovalevskiy  Gridpoint Dynamics
Nazih Najjar  Saudi Aramco
Henning Omre  NTNU
Philippe Renard  University of Neuchâtel
Amilcar Soares  Instituto Superior Técnico
Mohan Srivastava  Independent Consultant

Location

Florence, capital of Italy’s Tuscany region, has been chosen to host the Fourth EAGE Conference on Petroleum Geostatistics 2019. This historic city is home to many masterpieces of Renaissance art and architecture. One of its most iconic sights is the Duomo, a cathedral with a terracotta-tiled dome engineered by Brunelleschi and a bell tower by Giotto. The Galleria dell’Accademia displays Michelangelo’s David. The Uffizi Gallery exhibits Botticelli’s The Birth of Venus and Da Vinci’s Annunciation.

Venue

Auditorium al Duomo
Via dei Cerretani 54R
50123 - Florence, Italy

Conference Overview

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Important Dates

Registration is Open!

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<td>15 June 2019</td>
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Technical Programme

Oral Presentations | Tuesday 3 September 2019

**AMPHITHEATER ROOM**

**Geostatistics I**

P. Abrahamsen (Norwegian Computing Center), Y.C. Dexcote (Shell)

08:30 TuPG01 - A Geology Driven Workflow Combining Process-like, Surface-based and Unstructured Meshing for Reservoir Modelling - D. Ledez*  
*Total S.A.

08:55 TuPG02 - Characterizing Connectivity in Heterogeneous Porous Media Using Graph Laplacians - E. Nesvold*, T. Mukerji  
*Stanford University

09:20 TuPG03 - Direct Geostatistical Simulation on Unstructured Grids I: Recent Improvements for Additive Variables - P. Biver*, S. Fuet, D. Allard  
*Total S.A.; ‘Ephesia Consult; ‘IFP Energies nouvelles

*Total S.A.; ‘University of Neuchâtel; ‘Sorbonne University; ‘IFP Energies nouvelles

10:10 Coffee Break / Poster Session 1

**Geostatistics II**

P. Renard (University of Neuchâtel), M. Srivastava (Independent Consultant)

10:40 TuPG05 - Topologically Constrained Boolean Discrete Fracture Network Models - T. Manzocchi*  
*Fault Analysis Group & iCRAG, University College Dublin

11:05 TuPG06 - Quantifying Uncertainty of Fracture Intensity in Reservoirs - S. Vitel*, L. Li  
*Chevron

*King Abdullah University of Science and Technology

11:55 TuPG08 - Upscaling of Plastic Geomechanical Properties to Reproduce Anisotropic Failure in Heterogeneous Continua - B. Zhang*, R. Chalaturnyk*, J. Boisvert  
*University of Alberta

12:20 Lunch Break

**Multi-point Geostatistics**

T. Chugunova (Total), E.V. Kovalevskiy (GridPoint Dynamics)

*Norwegian University of Science and Technology

13:45 TuPG10 - A Workflow for Generating Hierarchical Reservoir Geomodels Conditioned to Well Data with Realistic Sand Connectivity - D.A. Walsh*, T. Manzocchi  
*iCRAG, University College Dublin
**TuPG11 - K-fold Cross-validation of Multiple-point Statistical Simulations** - P. Judá*, P. Renard, J. Straubhaar
- University of Neuchâtel

**TuPG12 - Multiple-point Statistics Based on Gaussian Pyramids of the Training Image** - J. Straubhaar*, P. Renard, T. Chugunova
- ChYNN, University of Neuchâtel; Total S.A.

**1500 Coffee Break / Poster Session 1**

**Object and Process-based Modelling**
C. Daly (Schlumberger), K.H. Omre (NTNU)

- Emerson Exploration and Production Software; Equinor ASA

**TuPG14 - Using Geological Process Modeling to Enhance Lithofacies Distribution in a 3-D Model: An Example.** - D. Otto*, D. Hodgetts
- School of Earth and Environmental Sciences, University of Manchester

**TuPG15 - Random Walk for Simulation of Geobodies: A New Process-like Methodology for Reservoir Modelling** - G. Massonnet*
- Total

**TuPG16 - Improving Geological Robustness into Iterative Geostatistical Seismic Inversion** - P. Pereira**, I. Calçôa*, L. Azavedo*, R. Nunes*, A. Soares*
- CERENA/Instituto Superior Técnico

**1735 End of Day 1**

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**Poster Presentation | Tuesday 3 September 2019**

The posters for 3 September will be displayed throughout the day and presented during coffee breaks.

**Poster Area: Giuliano Borselli Hall**

**Coffee Break / Poster Session 1**

**TuP01 - Stochastic Seismic Inversion Based on a Fuzzy Model** - E. Kovalevsky**, M. Volkova
- GridPoint Dynamics

- Kuwait Oil Company (K.S.C.)

**TuP03 - Raising the Bar: Electrofacies as a Framework for Improving the Practice of Geomodeling** - D. Garner*
- TerraMod Consulting

- Durham University

- University of Calgary; University of Manitoba

**TuP06 - Statistical Characteristics of a Fractured Model from Seismic Data via Topological Analysis of Diffraction Images** - M. Protasov*, T. Chakchakova*, D. Kolukhin*, Y. Bazakin*
- Institute of Petroleum Geology & Geophysics SB RAS

**TuP07 - The Effect of Fracture Clustering on Confined Fractured Zones: Numerical Modeling and Analyses** - A. Alali*, K. Marfurt, N. Nakata
- Saudi Aramco; University of Oklahoma; Massachusetts Institute of Technology University

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**TuP08 - Using Seismic Images for Scaling of Statistical Model of Discrete Fracture Networks** - D. Kolyukhov**, M. Protasov
- IGUS SB RAS

**TuP09 - Simulation of Near-fault Damage Zones** - V. Lisitsa**, V. Tcheverda**
- D. Kolyukhov, V. Volianskaya
- Trofimuk Institute of Petroleum Geology & Geophysics SB RAS; Sobolev Institute of Mathematics SB RAS; Rosneft

**TuP10 - Tease out more – Advanced Porosity Analysis in Fractured Reservoirs Combining Statistical Method with Outcrop Data** - J. Püttmann*, U. Eckelberg, J. Hohenegger
- OMV Expl. & Production GmbH

- Universidade do Vale do Rio dos Sinos; PETROBRAS S.A.

- MINES ParisTech, PSL University

**TuP13 - Estimation of Geobody Dimensions Using Standard Geostatistical Tools** - K. Vogel*
- KRP Consulting

- Universidade do Vale do Rio dos Sinos; PETROBRAS S.A.; Exploration & Production Softwares EPS

**TuP15 - Combining Stratigraphic Forward Modelling with Multiple-point Statistics - A Case Study from Seismic to Tracer Response** - J. Peisker**, A. Miller*, M.J. Etner*
- OMV Exploration & Production

**TuP16 - Multiple-points Statistics Simulations of the Roussillon Continental Pliocene Reservoir Using DeeSse** - V. Dall'Alba**, P. Renard1, J. Straubhaar*, P. Renard1
- University of Neuchâtel

**TuP17 - Simplified Direct Sampling Method for Geostatistical Multiple-point Simulations** - P. Judá**, J. Straubhaar*, P. Renard1
- University of Neuchâtel

- Total S.A.; UNINE

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**Oral Presentation | Wednesday 4 September 2019**

**08:00 Registrations & Welcome Coffee**

**AMPHITHEATER ROOM**

**Seismic Reservoir Characterization I**
I. Azivedo (Instituto Superior Técnico), D. Grana (University of Wyoming)

**08:30 Keynote Lecture - P.Thore**
- Total

**09:10 WePG01 - Geostatistical Filtering of Noisy Seismic Data Using Stochastic Partial Differential Equations (SPDE)** - M. Pereira**, C. Mageron**, N. Desassis
- ESTIMAGES; MINES ParisTech, PSL University

**09:35 WePG02 - Joint Facies/elastic Inference in Waveform Inversion** - J. Gunning*
- CSIRO Energy

**10:00 Coffee Break / Poster Session 2**
WePG03 - Adaptive Ensemble-based Petrophysical Inversion for Seismically Constrained Static Model Building - R. Moyen1,*, R. Poriez1, P. Roy1, R. Sabit1, R. Alamer1, F. Abdulaziz1
CGG, Kuwait Oil Company
10:55
WePG04 - Seismic Waveform Inversion of Elastic Properties Using an Iterative Ensemble Kalman Smoother - M. Gineste1,*, J. Eidsvik1
Norwegian University of Science and Technology
11:20
WePG05 - Self-updating Local Distributions in Geostatistical Seismic Inversion - L. Azevedo1,*, J. Narciso1, R. Nunes1, A. Soares1
CERENA-Instituto Superior Técnico
11:45
WePG06 - Bayesian Rock Physics Inversion for CO2 Storage Monitoring - B. Dupuy1,*, P. Nordmann1, A. Romdhane1, P. Eliasson1
SINTEF Industry
12:10
Lunch Break
13:10
Bayesian Inversion I
H.G. Borgos (Schlumberger), K.H. Omre (Norwegian University of Science & Technology)
13:30
WePG07 - The Posterior Population Expansion Ensemble Method to Invert Categorical Fields - P. Renard1,*, C. Jäggli2, Y. Degassen1, J. Straubhaar1
1. University of Neuchâtel
2. Federal University of Santa Catarina
14:00
WePG08 - A Bayesian Approach for Full-waveform Inversion Using Wide-aperture Seismic Data - S.L. Da Silva1,*, P. Carvalho1, C.A. Da Costa1, J. Araújo1, G. Corso1
1. Federal University of Santa Catarina
14:25
WePG09 - Joint Bayesian Spatial Inversion of Lithology/Fluid Classes, Petrophysical Properties and Elastic Attributes - T. Fjeldstad1,*, D. Graña1, H. Omre1
1. Norwegian University of Science and Technology, 2. University of Wyoming
14:50
Coffee Break / Poster Session 2
15:20
Bayesian Inversion II
E.L. Della Rossa (Eni S.p.A.A&I.P.), N.F. Najjar (Saudi Aramco)
15:45
WePG11 - Time-lapse Fluid Prediction Using Selection Gaussian Prior Models in a Bayesian Framework - O.B. Forberg1,*, H. Omre1, Ø. Kjennes1
1. Norwegian University Of Science And Technology, 2. Akker BP
16:10
WePG12 - Comparison of Recursive Neural Network and Markov Chain Models in Facies Inversion - E. Tatarico1,*, W. Leão1, D. Graña1
1. Petrobras
16:35
WePG13 - Spatial Continuity and Simultaneous Seismic Inversion of Facies and Reservoir Properties Ready for Flow Simulation - H. Debye1,*, ICGG
1. Norwegian University of Science and Technology
17:00
Discussion
19:00
Conference Dinner
22:00
End of Day 2

WePG10 - Markov Chain Monte Carlo Methods for High-dimensional Mixture Distributions - L. Passos de Figueiredo1,*, D. Graña1, M. Reisberg1, B. B. Rodrigues1
1. Federal University of Santa Catarina
2. University of Wyoming
3. Petrobras

WePG14 - Ensemble Updating of Binary State Vectors by Maximising the Expected Number of Unchanged Components - M.K. Lee1,*, H. Tjemeliland1
1. Norwegian University of Science and Technology

WePG01 - The Data Integration Approach for Prospecting Missed Intervals. An Example Based on Gazprom Neft Assets. - E. Akhmetvaliev1,*, A. Belanozhka1, M. Plišenko1, K. Kyzyama2
1. NTC NIS-Naftagas, 2. LC Gazpromneft-Obnern

WePG02 - Automated Facies Classification for Seismic Inversion - R. Beloborodov1,*, J. Gunnings1, M. Perukhchina1, I. Emelyanova1, M.B. Clennell1, J. Hauser1
1. CSIRO Deep Earth Imaging FSP, 2. CSIRO Energy, 3. CSIRO Mineral Resources

WePG03 - Application of PLT and Tracer Testing Data on Deposition Study and Reservoir Facies Modelling - R. Han1,*, C. Tian1, B. Song1, Y. Gao1
Research Institute of Petroleum Exploration and Development, CNPC

WePG04 - Optimization of the Development of the Yurubcheno-Tokhomsky Field Based on the Conceptual Geological Model - N. Kutukova1
Rosneft

WePG06 - A Simulation Analysis of CO2 Capture and Underground Storage Monitoring in Smeaheia - S. Anyosa1,*, S. Bunting1, J. Eidsvik1, A. Romdhane1
1. Norwegian University of Science and Technology, 2. SINTEF

WePG15 - Statistical Description of Weak Interface Properties and their Impact on Hydraulic Fracture Height - C. Hammerquist1,*, Y. Aimene1
1. Delit University of Technology, 2. Equinor, 3. Military Technical Academy “Ferdinand I”

WePG08 - Implication of Seismic Data on Verification of a Deep Seated Salt Dome in Sirri-A Island, Iran - A. Yassaghi1,*, H. Zangene1
Tarbiat Modares University

WePG07 - Statistical Description of Weak Interface Properties and their Impact on Hydraulic Fracture Height - C. Hammerquist1,*, Y. Aimene1
1. Delit University of Technology, 2. Equinor, 3. Military Technical Academy “Ferdinand I”

WePG17 - Statistical Description of Weak Interface Properties and their Impact on Hydraulic Fracture Height - C. Hammerquist1,*, Y. Aimene1
1. Delit University of Technology, 2. Equinor, 3. Military Technical Academy “Ferdinand I”

WeP09 - Lagrange Multiplier as a Confidence Criterion of Geostatistical Salt Dome in Sirri-A Island, Iran - A. Yassaghi1,*, B. Khan1, A. Ouenes2, Y. Dagasan1
1. Tarbiat Modares University, 2. Oregon State University

WeP10 - Geostatistical Shale Rock Physics AVA Inversion. - M. Czy1,*, L. Azevedo1
1. Institute of Geophysics, PAS, 2. CERENA-Instituto Superior Técnico

WeP11 - Features of Factor Models in Seismic - G. Mitrofanov1
1. Institute of Petroleum Geology & Geophysics SB RAS

WeP12 - Statistical Properties of Multiplicative Factor Models - G. Mitrofanov1
1. Institute of Petroleum Geology & Geophysics SB RAS

WeP13 - Iterative Approach of Gravity and Magnetic Inversion through Geostatistics - A. Volkova1,*, V. Merkulov1
1. Tomsk Polytechnic University

WeP14 - Study on the Fine Prediction of Ediacaran Fractured-vuggy Karst Reservoir - Y. Wang1,*, D. Liu1, Y. Zhang1, L. Li1, X. Wang1
1. BP/CNPC

WeP15 - Seismic Attenuation in Two-Scale Porous Fractured Media – A Numerical Study - V. Lisitsa1,*, M. Novikov1, Y. Bazaikin1
1. Trofimuk Institute of Petroleum Geology & Geophysics SB RAS, 2. Sobolev Institute of Mathematics SB RAS

WeP16 - Seismic Tools to Mitigate the Challenges of Thin Tight Carbonate Reservoir: A Case Study - S.K. Bhukta1,*, E. Al-Shehri1, S.K. Singh1, P.K. Nath1, A.S. Al-Ajmi1, B. Khan1, P. Najam1
1. Kuwait Oil Company, 2. Software Integrated Solutions, Schlumberger

WeP17 - Geostatistical Analysis of Seismic Data for Regional Modeling of the Broom Creek Formation, North Dakota, USA - A. Livers-Douglas1,*, M. Burton-Kelly1, B. Oster1, W. Picci1, N. Bosshart1
1. Energy & Environmental Research Center

WeP18 - Statistical Properties of Multiplicative Factor Models - G. Mitrofanov1
1. Institute of Petroleum Geology & Geophysics SB RAS

WeP19 - Geostatistical Analysis of Seismic Data for Regional Modeling of the Broom Creek Formation, North Dakota, USA - A. Livers-Douglas1,*, M. Burton-Kelly1, B. Oster1, W. Picci1, N. Bosshart1
1. Energy & Environmental Research Center

WeP20 - Geostatistical Analysis of Seismic Data for Regional Modeling of the Broom Creek Formation, North Dakota, USA - A. Livers-Douglas1,*, M. Burton-Kelly1, B. Oster1, W. Picci1, N. Bosshart1
1. Energy & Environmental Research Center
Oral Presentation | Thursday 5 September 2019

08:00 | Registrations & Welcome Coffee

AMPHITHEATER ROOM

Machine Learning
C. Daly (Schlumberger), O. Dubrule (Imperial College London)

08:30 | Keynote Lecture - V. Demyanov*
1Heriot-Watt University

09:10 | ThPG01 - 3D Geological Image Synthesis from 2D Examples Using Generative Adversarial Networks - G. Colliard1, P. Renard1
1University of Neuchâtel; École Normale Supérieure de Lyon

09:35 | ThPG02 - Deep Stochastic Inversion - L. Mosser1, O. Dubrule1
1Imperial College London

10:00 | Coffee Break / Poster Session 3

History Matching
L. Azevedo (Instituto Superior Técnico), E.L. Delia Rossa (Eni S.p.A. E&P)

10:30 | ThPG03 - Integrated Geo-modelling and Ensemble History Matching of Highly Faulted Turbiditic Reservoir Model - V. Zaccardi1*, A. Abadpour1, N. Haller1, P. Berthet1, D. Rappin1, J. Grange-Praderas1
1Total E&P

10:55 | ThPG04 - Ensemble History Matching Enhanced with Data Analytics – A Brown Field Study - E. Toistulkin2*, E. Barrela1, A. Khrulenko1, J. Halstein1, V. Demyanov1
2ConocoPhillips Norge; 1Heriot-Watt University; 3NORCE - Norwegian Research Centre

11:20 | ThPG05 - Updating MPS Facies Realizations Using the Ensemble Smoother with Multiple Data Assimilation - A. Thonin1*, A. Abadpour1, T. Chugunova1
1Total S.A.

11:45 | ThPG06 - Improving Local History Match Using Machine Learning Generated Regions from Production Response and Geological Parameter Correlations - T. Buckle1*, R. Hutton1, V. Demyanov1, D. Arnold1, A. Antropov2, E. Khanyba2, M. Pilipenko2, L. Stulov2
1Heriot-Watt University; 2NTC NIS

12:10 | Lunch Break

Data Integration
V. Demyanov (Heriot-Watt University), N.F. Najjar (Saudi Aramco)

13:10 | ThPG07 - Fluid Flow Consistent Geostatistical History Matching of an Onshore Reservoir - E. Barrela1*, L. Azevedo1, A. Soares1, L. Guerreiro2
2Instituto Superior Técnico; 3Partex Oil and Gas

13:35 | ThPG08 - Revisiting the Method of Ensemble Randomized Maximum Likelihood. - P.N. Raanes1*, G. Evensen1*, A.S. Stordal1
1*Norwegian University of Science and Technology; 2College of Geosciences, China University of Petroleum

14:00 | ThPG09 - Theoretical and Practical Aspects of Stein Variational Gradient Descent with Applications to Data Assimilation - A. Stanssen2*, R.J. Moraes1, P. Nima Raanes1, G. Evensen1
1*Norwegian Energy, 2Petrobias Research & Development Center

14:25 | ThPG10 - Well Logs Inversion Into Lithology Classes: Comparing Bayesian Inversion and Machine Learning - M. Tian1*, H. Ömre1
1Norwegian University of Science and Technology; 2College of Geosciences, China University of Petroleum

14:50 | Coffee Break / Poster Session 3

Uncertainty Quantification
J.S. Gunning (CSIRO Energy), B. Hamouche (Saudi Aramco)

15:20 | ThPG11 - Well Log Data Standardization, Imputation and Anomaly Detection Using Hidden Markov Models - K. Struninskiy1, A. Klinitisky1*, A. Reshytko1, D. Egorov1, A. Shchetepnov1, A. Sabirov1, D. Vetrov1, A. Semenikhin1, O. Osmonaliev1, B. Belzorov2
1IBM Science and Technology Center; 2Gasprom Neft Science and Technology Center; 3Higher School of Economics

15:45 | ThPG12 - Seismic Estimation of Sub-resolution Reservoir Properties with Bayesian Evidential Learning: Application to an Offshore Delta Case - A. Pradhan1*, T. Mukerji1
1Stanford University

16:10 | ThPG13 - Monte Carlo-based Framework for Quantification and Updating of Geological Model Uncertainty with Borehole Data - Z. Yin1*, J. Caers1
1Stanford University

16:35 | ThPG14 - Boolean Spectral Analysis in Categorical Reservoir Modelling - N. Islamgulov1*, V. Borovitsky1, M. Lifshits2, M. Platonova2
1Gasprom Neft Science and Technology Center; 2St. Petersburg State University

17:00 | Discussion

17:25 | End of Day 3

Poster Presentation | Thursday 5 September 2019

The posters for 5 September will be displayed throughout the day and presented during coffee breaks.

POSTER AREA: GIULIANO BORSELLI HALL

Coffee Break / Poster Session 3

ThP01 - Expecting the Unexpected: The Influence of Elastic Parameter Variance on Bayesian Facies Inversion - C. Sanchis1*, R. Hauge1, H. Kjønsberg1
1Norsk Regnesentral / Norwegian Computing Center

ThP02 - Geostatistical Inversion Application of Carbonate Reservoir Prediction in Tahe Oilfield, Northwest China - O. Li*
1China University of Geosciences

ThP03 - Assisted History Matching of 4D Seismic Data - A Comparative Study - K. Fossum1*, R.J. Lorentzen1
1NERC

ThP04 - Stochastic Realizations of Gaussian Random Fields: Analysis and Comparison of Modeling Methods - R. Gazizov, A. Bezrukov1*, B. Fedotkistov1
1BashePNFinn, Rosneft
**ThP05** - A Statistical Workflow for Mud Weight Prediction and Improved Drilling Decisions - J. Paglia1*, J. Eidsvik1
Norwegian University of Science & Technology

**ThP06** - Uncertainty Evaluation to Improve Geological Understanding for More Reliable Hydrocarbon Reserves Assessment: Case Study - E. Khanyba1*, S. Frollov, M. Blagojević, J. Kukavica, R. Yagfarov, A. Belanouhka1
1NTC NIS-Naftagas

**ThP07** - Automatic Scenarios Extraction from Depth Uncertainty Evaluation - P. Correia*, J. Chauveau*, Y. Meric, F. Gelfray, H. Binet, P. Ruffo1, L. Bazzana1
1Geovariances; 2Eni S.p.A. - Upstream and Technical Services

**ThP08** - Feedback Between Gravity and Viscous Forces in Two-phase Buckley-Leverett Flow in Randomly Heterogeneous Permeability Fields - Alikhani1*, O. Djuraev1
1Gazprom Neft’s Science and Technology Center

1Gazprom Neft’s Science and Technology Center

**ThP10** - A Bayesian Approach to Uncertainty Quantification in Geophysical Basin Modeling - A. Pradhan1*, T. Mukerji1
1Stanford University

**ThP11** - Advantage of Stochastic Facies Distribution Modeling for History Matching of Multi-stacked Highly-heterogeneous Field of Dnieper-Donetz Basin - A. Romi1*, O. Burachok, M.L. Nistor2, C. Spyrou1, Y. Seilov1, D. Djurasev1, S. Markovsky1, D. Grytsai3, O. Goryacheva2, R. Soyma1
1Politecnico di Milano; 2University of Arizona

**ThP12** - Incorporating Discrete Microfacies Sequences to Improve Permeability Estimation in Sandstone Reservoirs - W. Al-Mudhafar1*
1The University of Texas at Austin

**ThP13** - A selection Kalman Model - M. Conjad1*, H. Omre1
1NTNU

**ThP14** - Amplitude Supported Prospects, Analysis and Predictive Models for Reducing Risk of Geological Success - I. Tishchenko1*, I. Mallinson1
1OMV E&P GmbH

**ThP15** - Application of Long Short-term Memory Algorithm for Prediction of Shale Gas Production in Alberta - K. Lee1*, J. Lim1, D. Yoon1, S. Kim1, T. Lee1, J. Choe1
1Korea Institute of Geoscience and Mineral Resources; 2SmartMind; 3Hanyang University; 4Seoul National University

**ThP16** - Machine-learning-based Approach for Automated Identification of Produced Water Types from Conventional and Unconventional Reservoirs - P. Birkle1*, M. Zouch1, M. Altazgebah1, M. Alwohhabi1
1Saudi Aramco; 2Imam Abdulrahman Bin Faisal University

**ThP17** - Application of a Serial Denoising Autoencoder for Geological Plausibility of a Channelized Reservoir in History Matching - S. Kim1*, B. Min1, J. Choe1
1Korea Institute of Geoscience and Mineral Resources; 2Ewha Womans University; 3Seoul National University

**ThP18** - Automatic Recognition of Lithological Units in Gas-bearing Shale Complex with Neural Networks (the Baltic Basin, Poland) - K. Bobek1*
1Polish Geological Institute - National Research Institute

**ThP19** - Geomodeling Using Generative Adversarial Networks and a Database of Satellite Imagery of Modern River Deltas - E. Nesvold1*
1Norwegian Research Centre

**ThP20** - Ensemble-based Kernel Learning to Handle Rock-physics-model Imperfection in Seismic History Matching: A Real Field Case Study - X. Luo1*, L. Lorenzen1*, T. Bhakta1
1Stanford University

**ThP21** - Extraction of Petrophysical Information and Formation Heterogeneity Estimation from Core Photographs by Clustering Algorithms - D. Egorov1*
1LLC «Gazpromneft STC»

**ThP22** - Geological Heterogeneous Effect on Fluid Flow and Solute Transport During Low Salinity Water Flooding - Al-Ibadi1*, K. Stephen1, E. Mackay1
1Heriot-Watt University

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**Oral Presentation | Friday 6 September 2019**

**08:00** Welcome Coffee

**08:30** FrPG02 - Using Deep Directional Resistivity for Model Selection and Uncertainty Reduction in the Edvard Grieg Depth Conversion - O. Kolbjørnsen1*, P. Dahle1, M.D. Bjerke1, B.A. Bakke1, K.R. Straith2
1Universitetet i Oslo; 2Lundin Norway; 3Norsk Regnesentral

**08:55** FrPG02 - Inference of PluriGaussian Model Parameters in SPDE Framework - D. Renard1*, N. Desassis1, X. Freulon1
1MINES ParisTech

**09:20** FrPG03 - Parametric Covariance Estimation in Ensemble-based Data Assimilation - J. Skauvold1*, J. Eidsvik1
1Norwegian University of Science & Technology

**09:45** FrPG04 - To Drill Or Not To Drill? Mature North Sea Field Case Study - L. Adamson1*, A. Kidd1, T. Frenz1, M. Smith1
1Rock Flow Dynamics; 2TAQA

**10:10** Coffee Break

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**Geostatistical Models I**

**T. Chugunova (Total), P. Renard (University of Neuchâtel)**

**09:00** Geostatistical Models II

**B. Hamouche (Saudi Aramco), M. Srivastava (Independent Consultant)**

**12:00** Closing Remarks

**12:45** End of Conference
Registeration Fees
All fees are in Euros (€). One Euro of your total registration fee is donated to the EAGE Green Fund.
Please note: The deadlines are following the Local Time in the Netherlands.

<table>
<thead>
<tr>
<th>REGISTRATION AND PAID</th>
<th>UNTIL 15/06/2019</th>
<th>FROM 16/06/2019 - 23/08/2019</th>
<th>FROM 24/08/2019 UNTIL ON-SITE</th>
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<tr>
<td>EAGE Green Member1,2,5</td>
<td>€ 845</td>
<td>€ 945</td>
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<td>EAGE Bronze/Silver/Gold Member1,2,5</td>
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<td>Non-Member1</td>
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 STUDENTS
- EAGE Student Green Member1,2,5 | € 250 | € 300 | € 350 |
- EAGE Student Bronze/Silver/Gold Member1,2 | € 225 | € 275 | € 325 |
- Student Non-member1,2,3,4 | € 275 | € 325 | € 375 |

1. Members please note: To qualify for the member registration fee, your EAGE membership dues for 2019 must have been paid and confirmed. The processing time for membership applications or renewals is around 10 working days.
2. To qualify for the reduced student registration fee:
   • Students must be enrolled in a full-time study programme at a recognized university or institute.
   • The registration must be accompanied by a copy of a student ID card and/or official proof of enrolment.
3. The Non-Member fee includes EAGE membership for the remainder of 2019. This membership will be activated shortly after the conclusion of the event.
4. Student Non-Members cannot be older than 34 years of age (when registering).
5. Green membership status gives you a € 50 discount (€ 25 for students) on the Non-Member fee for each EAGE event registration; starting from Bronze status, you can benefit from an even greater reduced EAGE member registration fee.

Social Programme
EAGE offers you the opportunity to get to know the conference delegates in a more informal environment. Please inform us via eage.events@eage.org if you would like to join.

Icebreaker Reception
Monday 2 September, 17:00 - 19:00 hrs
An Icebreaker Reception is being organized at the conference venue (Auditorium al Duomo) in the Giuliano Borselli Hall (Ground floor).

Conference Dinner
Wednesday 4 September, 19:00 - 22:00 hrs
A Conference Dinner is being organized in the panoramic “B-Rooft” restaurant, located on the fifth floor of the historic Grand Hotel Baglioni in the center of Florence, Italy. It is only a 5 min walk from the conference venue.

B-Rooft
Piazza Dell’Unità Italiana, 6
50123 Florence
Italy

Sponsoring
Petroleum Geostatistics 2019 offers excellent sponsoring opportunities to create high visibility. For more information about sponsoring, please refer to the ‘Sponsor guide’ that is available on the conference website or contact us at eage.events@eage.org.

Lanyards/ Coffee Breaks/ Lunch Breaks Sponsor

Contact
Petroleum Geostatistics 2019 conference is organized by the EAGE Europe Office. For enquiries please contact the EAGE Europe office at +31 889955055 or email eage.events@eage.org

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